

Appl. No. 10/076,136
Amd. Dated November 5, 2004
Reply to official action of May 5, 2004

REMARKS/ARGUMENTS

Claims 1-37 are pending in the above-captioned application. All of the pending claims were subject to a restriction requirement. As a result of Applicants' election of claims 1-21 and 32-36, claims 22-31 and 37 have been withdrawn from consideration. Of the elected claims, claims 1-3, 5-21, and 32-36 have been rejected, and claim 4 has been objected to.

I. Restriction Requirement

Applicants confirm that they elect to prosecute the claims in Group I, which consists of claims 1-21 and 32-36. This election is made without traverse.

II. Rejections Under 35 U.S.C. §112

Claims 16-20 have been amended to specify that they depend from claim 15. Thus the Examiner assumption about the dependency of claims 16-20 was correct.

III. Provisional Double Patenting Rejection

The Examiner provisionally rejected claims 1-21 and 32-27 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application Serial No. 10/225,454. A rejection based on a nonstatutory type of double patenting can be avoided by the filing of a terminal disclaimer. MPEP 804.02. Accordingly, Applicants are filing a terminal disclaimer in which they disclaim the term of any patent granted on this application that would extend beyond the term of any patent granted on copending Application Serial No. 10/225,454. The terminal disclaimer is included in this communication.

IV. Rejections Under 35 U.S.C. §102

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Claims 1-3, 5-6, 15-21, and 32-36 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,267,858 ("Parce"). To anticipate a claim, a reference must teach every element of the claim. MPEP § 2131. Applicants must respectfully disagree with the Examiner's assertion that Parce teaches every element of the rejected claims. For example, claim 1 includes the elements of a planar body structure disposed in a first plane; a first channel segment disposed in a plane parallel to the first plane; and a detection channel segment that is substantially orthogonal to the first plane. In the Office Action, the Examiner argued that the "first channel segment" in claim 1 could correspond to the channel labeled 112 in Figure 1 of Parce, while the "detection channel segment" in claim 1 could correspond to the channel labeled 110 in Figure 1 of Parce. Applicants assert that the channel labeled 110 in Figure 1 of Parce cannot possibly correspond to the "detection channel segment" of claim 1. The device in Figure 1 of Parce consists of a planar substrate (102 in Figure 1). Parce col. 15 lines 15-16. If the device in Figure 1 of Parce is to be correlated to the elements of claim 1, the planar substrate must correspond to the planar "body structure" specified in claim 1. Since all of the channels shown in Figure 1 of Parce are fabricated into the surface of the planar body structure 102 (Parce col. 15 lines 47-49), they all must lie within the plane defined by that surface of the body structure. In other words, all of the channels (110, 112, 114) shown in Figure 1 of Parce lie within a plane parallel to the "first plane" defined by the body structure. Therefore channel 110 cannot meet the claim 1 limitation that it be oriented substantially orthogonally to the first plane. Although channel 110 may be orthogonal to channel 112, those channels are orthogonal to each other within the same plane, which is a plane parallel to the plane defined by the planar substrate 102. The pending application clearly specifies what it means for a channel to be "substantially orthogonal" to the plane defined by a planar body structure. Application pg. 5 line 5 – pg. 6 line 11. The channels in Figure 1 of Parce are just like the "conventional system" channels discussed in that portion of the application. Since claim 1 requires that the "detection channel segment" be orthogonal to the plane defined by a planar body structure, and none of the channels in Figure 1 of Parce meet that requirement, the device shown in Figure 1 of Parce cannot anticipate claim 1. Since the claims dependent from claim 1, which include claims 2, 3, 5, and 6, are by definition narrower than claim 1, Parce could not anticipate those claims either.

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Just like claim 1, the other independent claims allegedly anticipated by Parce (claims 15, 21, and 32) also require that there be a "detection channel" (or "detection channel segment") that is oriented substantially orthogonally to a planar body structure. Since the device in Figure 1 of Parce does not contain any channel oriented substantially orthogonally to the planar body structure 102, Parce cannot anticipate any one of claims 15, 21, or 32. Since claims 16-20 and 33-36 depend from claims 15 and 32 respectively, Parce cannot anticipate those claims either. So in summary Parce cannot anticipate any of claims 1-3, 5-6, 15-21, and 32-36 because those Parce does not appear to teach the concept of channels oriented in a direction substantially orthogonal to a planar substrate.

Claims 1-3, 5-6, and 32-36 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,928,880 ("Wilding"). Figure 6a of Wilding shows a microfluidic device or "chip" 10 sitting inside an analytical instrument 50. Wilding col. 6 lines 4-15. The microfluidic device 10 in Figure 6a in Wilding is shown in perspective view in Figure 1 of Wilding. The channels (e.g. channels 24a and 24b) in the microfluidic device 10 correspond exactly to the channels of the "conventional" system shown in Figure 2A of the Application. In other words, all of the channels in the microfluidic device 10 of Wilding extend along a plane parallel to the plane defined by the planar substrate in which the channels are etched. So Wilding does not appear to show a detection channel that is substantially orthogonal to the planar body of the microfluidic device. Although the detection region 117 in Figure 6a may be oriented substantially orthogonally to channels in the analytical instrument, the detection region 117 is not substantially orthogonal to the planar body of the chip as required by claim 1. Since the other independent claim allegedly anticipated by Wilding, claim 32, also require that there be a "detection channel" (or "detection channel segment") that is oriented substantially orthogonally to a planar body structure, Wilding cannot anticipate that claim either. Since claims 2-3 and 5-6 depend from claim 1, and claims 33-36 depend from claim 32, and since those dependent claims are by definition narrower than claims 1 and 32, those dependent claims must be allowable over Wilding if Wilding does not anticipate claims 1 and 32. Accordingly, Applicants assert that Wilding does not anticipate any of claims 1-3, 5-6, and 32-36.

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V. Rejections Under 35 U.S.C. § 103

Claims 7-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over either Parce or Wilding. Applicant respectfully traverses this rejection based on Parce because 35 U.S.C. § 103(c) disqualifies Parce from being used as prior art for an obviousness rejection. MPEP Section 706.02(k). Since the present application claims priority to U.S. Provisional Application No. 60/269,174, which was filed on February 15, 2001, the Parce reference only qualifies as prior art under § 102(e) (and/or § 102(f) or (g)). In addition, both the instant application and the Parce reference were commonly owned by the same present assignee, Caliper Technologies Corp. (now Caliper Life Sciences, Inc.), at the time the claimed invention of the present application was made. Accordingly, the Parce reference cannot be applied in a rejection under 35 U.S.C. § 103(a) under the provisions of 35 U.S.C. § 103(c). Therefore the obviousness rejection of claims 7-14 based on Parce is moot.

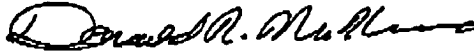
The obviousness rejection of claims 7-14 based on Wilding appears to arise from the rationale that claim 1 is anticipated by Wilding, and that the additional limitations in claims 7-14 are rendered obvious by Wilding. So if claim 1 is not anticipated by Wilding, then the obviousness rejection of claims 7-14 based on Wilding cannot be sustained. Since Applicants assert that Wilding does not anticipate claim 1, Applicants also assert that the obviousness rejection of claims 7-14 cannot be sustained.

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CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe that the present application is in condition for allowance and action toward that end is respectfully requested. If the Examiner believes that a telephone interview would expedite the examination of this application, the Examiner is requested to contact the undersigned at the telephone number below.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 5, 2004, by Michael Moores

Signed: 